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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,751	04/03/2001	E. Jennings Taylor	28850-15CP2	9120

7590

07/01/2002

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EXAMINER

LEADER, WILLIAM T

ART UNIT

PAPER NUMBER

1741

5

DATE MAILED: 07/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE  
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DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

### OFFICE ACTION SUMMARY

Responsive to communication(s) filed on \_\_\_\_\_

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

Ordered statutory period for response to this action is set to expire 3 month(s), or thirty days, never is longer, from the mailing date of this communication. Failure to respond within the period for response will cause application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 3(a).

#### Disposition of Claims

Claim(s) 1-30 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-15 and 22-30 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claim(s) 16-21 are subject to restriction or election requirement.

#### Location Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

Certified copies not received: \_\_\_\_\_

Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of Reference Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

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Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-15 and 22-30, drawn to a method for depositing metal, classified in class 205, subclass 103.
- II. Claims 16-21, drawn to a semiconductor wafer, classified in class 257, subclass 499.

The inventions are distinct, each from the other because:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process of the group I claims can be used to make a product other than that of the Group II claims. For example, rather than making a semiconductor wafer, the process could be used to depositing a smooth metal layer on a microrough metal sheet.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Polly Owen on Monday, June 24, 2002, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-15 and 22-30. Affirmation of this election must be made by

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applicant in replying to this Office action. Claims 16-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15 and 22-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 6,319,384. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are substantially the same, the main difference being that the range of frequency of the train of pulses recited in the patent is from about 10 Hertz to about 12,000 Hertz while the range of frequency of the pulses recited in instant claim is from about 10 Hertz to about 5,000 Hertz. Choice of a narrower range within previously claimed range is an obvious modification.

Claims 1-15 and 22-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,319,384. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are of the instant application are broader than, and substantially encompasses the scope of the claims in the '384 patent. Independent claim 1 of the '384 patent recites that the electric

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current is passed "for an essentially continuous period of time until microscopic depressions on said microrough surface have been filled with said metal", and further recites that "said plating bath is substantially devoid of leveling agents". These two limitation have been omitted from the instant claims, thereby broadening their scope.

The disclosure is objected to because of the following informalities: the formulas 1-4 on page 20 appear to be incomplete; the relationship of this application to the parent and grandparent application has not been set forth at the beginning of the specification.

Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Loch patent (4,666,567), the Asai et al patent (4,489,488) and the Dubin et al patent (5,972,192) disclose the use of reverse polarity pulses in plating processes. The claims are considered patentable over the cited prior art for the reasons of record in parent application SN.09/553,623 and grandparent application SN 09/172,299.

Serial Number: 09/823,751

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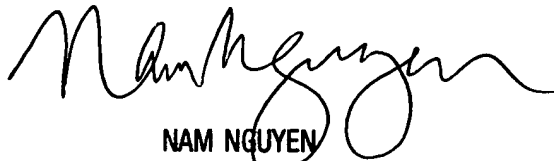
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Leader, whose telephone number is (703) 308-2530. The examiner can normally be reached Mondays-Thursdays and every other Friday from 7:30 AM to 4:00 PM eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached at (703) 308-3322. The fax phone number for *official* after final faxes is (703) 872-9311. The fax phone number for all other *official* faxes is (703) 872-9310. Unofficial communications to the Examiner should be faxed to (703) 305-7719.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0661.

Wt

William Leader:wtl  
June 26, 2002

  
NAM NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700



UNITED STATES DEPARTMENT OF COMMERCE  
Pat nt and Trademark Office

Washington, D.C. 20231

**TECH CENTER 1700  
FACSIMILE TRANSMISSION COVER SHEET**

DATE: March 20, 2003

REFERENCE: Serial Number: 09/823,751  
Applicant's Docket Number: 461987-008C3

TO: Mark Levy

FAX NUMBER: (937) 443-6635

VOICE NUMBER: (937) 443-6949

FROM: William Leader

FAX NUMBERS: (703) 305-3599, official faxes and (703) 305-7719, unofficial faxes

VOICE NUMBER: (703) 308-2530

MESSAGE: copy of cover sheet showing action was mailed on July 1, 2002

NUMBER OF PAGES (INCLUDING THIS PAGE): 2.

If you have not received all pages or have other difficulties with this facsimile transmission, please contact this Office as soon as possible at one of the following telephone numbers:

[ ] (703) 308-0661 (USPTO, Group 1100 Receptionist)

[x] (703) 308-2530 (Sender's Telephone Number)